

basis, should be worthy of perusal by all California physicians. He was instrumental in having the California Legislature establish a State Board of Health (the second State Board of Health to be established in the United States!), and in 1872 he advocated the enactment of a Federal law to establish a national department of health with its head a member of the Cabinet of the President of the United States, a proposal again coming to the front in Washington, in this year 1945, some 75 years later. From previous comments, the following quotation:

"Referring to Doctor Logan's proposed law for a Federal Bureau of Sanitary Science, submitted on December 13, 1872, to the third session of the 42nd United States Congress, he himself expressed his thought thereon in the following striking manner:

"Instead of being a mere adjunct to the Department of the Interior, there seems no good reason why such a bureau should not, before long, be erected into an independent department, second in its influence and importance to none other. *Let us have a Secretary of Public Health, as well as a Secretary of War.* The achievement of this great national undertaking, as of every other great and good work among men, can only be effected by time and patience, by rational inquiry, and enlightened perseverance. Until this is accomplished, each State must form a plan for the gathering of its own vital statistics, suited to its own circumstances, and must use for this purpose the means it may possess, and the machinery already in operation."

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**California Medical Association is Proud of its Founders.**—At the present time, there are many men and women in the profession who are working harder than ever before. However, contemplation of the zest for professional and associated labor as exemplified in the life of our Founder, cannot be otherwise than an inspiration to all who will take the time to read the sketch in this current issue.

If those of us who are present-day members of the California Medical Association are proud of our membership therein, equally so, may we take pride that our State Association had as its major founder, Thomas Muldrop Logan.\*

#### **SHOULD MILITARY HOSPITALS BE ESTABLISHED IN MINERAL SPRING AREAS OF CALIFORNIA?**

**Casualty Listings of the Armed Forces.**—On December 7, 1941, Japan made its attack on Pearl Harbor, plunging the United States within the succeeding week, into war with Japan, Germany and Italy. CALIFORNIA AND WESTERN MEDICINE in its recent June issue, on page 361, printed a report stating the War and Navy Departments had suffered casualties in excess of one million personnel during the three and one-half years that have elapsed since the Pearl Harbor bombing. The casualties include more than 600,000 soldiers and sailors who have been wounded. After initial treatment, many of these injured Americans were enabled to return to active combat and other duty, but other thousands have been invalided home and are now receiving care in

military hospital stations scattered throughout the United States.

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**With War On, Casualties Will Continue.**—The nature and seriousness of the warfare now going on in the Pacific areas is now known to all. Keen observers have stated that the conclusion of the war with Japan cannot be looked for in less than another year or more. Therefore, thousands of additional wounded soldiers and sailors will be brought back to the United States for follow-up medical care and rehabilitation treatment.

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**Where Should Wounded Men Returning to the States be Domiciled?**—Where can these men, suffering from physical and psychical injuries be domiciled to secure for them most efficient care and earliest possible return to military and civilian life? The majority will be sent to military hospitals, but where should these hospital stations be located to promote the best interests of all concerned?

That California, with its great variety of climatic and other conditions, possesses sites of undoubted value for military hospitals cannot be gainsayed. But even in California there are places where climatic, transportation, maintenance and other favorable factors exist in special and desirable combination.

For example, in both the northern section of California (Lake County-Calistoga, for instance) and in the southern portion of the State, are many mineral spring areas, easy of access, where one or more military hospitals could be established to excellent advantage. The military authorities, under existing law, could move in and purchase such a tract or tracts,—just as they have moved into office buildings and hotels of metropolitan centers, taking possession and ownership,—and could erect thereon all necessary hospital structures. In such a place or places, where natural thermal and other mineral spring facilities abound, spa therapy of highest standard, in combination with the best hospital regimen, could be instituted.

Mention could be made of one or more military hospitals that have been set up in California, where topographical and approach surroundings have necessitated expenditure of untold thousands of dollars, without compensatory advantages to the patients who must remain somewhat confined in the wards, because of rolling ground and location of buildings.

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**California Legislature has Twice Petitioned Military Authorities to Establish a Hospital in Mineral Spring Areas.**—Attention of readers is called to a joint Senate-Assembly resolution adopted by the 56th California Legislature, recently adjourned, the text of which appears in the current issue, on page 30.

The joint resolution was again sponsored by Senator George M. Biggar of Mendocino County, to whom thanks are extended.

Two years ago a somewhat similar resolution was unanimously passed by the 55th California

\* Other references to Dr. Thomas M. Logan may be found in CALIFORNIA AND WESTERN MEDICINE as follows: October, 1937, page 250; January, 1940, pages 6 and 27.

See also in "Transactions of Medical Society of State of California," Vol. I, 1870-1871.

Legislature, but for reasons not explained, the medical authorities of the Army and Navy have never followed through with the establishment of a hospital on a mineral spring site. (For reference thereto, see CALIFORNIA AND WESTERN MEDICINE, March, 1943, on pages 105 and 137.)

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**On the Value of Mineral Spring Therapy and Spa Regimen.**—An article by Henry E. Sigerist of Johns Hopkins Medical School was referred to, and from it the following excerpts are given:

To the European physician who comes to America it is very striking to find what little use this country is making of its mineral springs. The situation is so totally different from that which prevails in Europe that it calls for an analysis. . . .

Medicinal springs and their curative powers are mentioned by ancient and mediaeval medical writers. . . .

The European spas have been used for over 2,000 years. Medical theories changed. . . .

But whatever the theories were, patients for over 2,000 years went to the spas, bathed in their waters, drank them and found relief. Every medical theory was used to explain the effect of medicinal waters. The explanations changed, but there were always results. In every century patients were benefited by their cures. . . .

It is very unscientific to deny the experience of 2,000 years merely because we have no ready-made theory that explains all phenomena in every detail. It would have been foolish to deny the existence of lightning because electricity was not yet known. Experience has preceded science in medicine more than once. Our most valuable drugs, quinine, digitalis, opium, mercury and many others were given for centuries, long before pharmacology was able to explain their action. Oskar Baudisch has very pertinently shown how similar the situation was with regard to heliotherapy. Sunlight was used as a healing agent for centuries. Rickets were treated with ultra-violet rays. To "scientific physicians" this was a mere superstition—until the vitamins were discovered and it was found that sunlight changes the ergosterol of the skin into vitamin D. Chemistry until recently was gross chemistry; microchemistry is in its infancy still, and we are beginning to realize that a few molecules of a chemical compound can cause definite biological reactions. . . .

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**Not Yet Too Late for Establishment of a Military Hospital on a California Mineral Spring Site.**—If, in the future, additional military hospitals are to be established in California, it is to be hoped that one or more will be erected in a mineral spring area.

In years to come, when such institutions may have fulfilled their immediate and special needs, the grounds and buildings either could be given by the Federal Government to California, or purchased by the State, for maintenance of curative institutions such as Saratoga Springs, owned by the State of New York. In that wise, the money expended, would have doubly justified itself: first, in excellent and desirable hospitalization for many of our wounded soldiers and sailors; and secondly, in making possible in days ahead, promotion of institutional and accessory care to thousands of civilian citizens suffering from chronic conditions, for whom scientific spa regimen, under the California skies, would give better opportunities for reestablishment of health and prolongation of life.

It is difficult to understand why the medical departments of the Army and Navy have not availed themselves of some of Nature's curative means, since institutions established on mineral

spring sites can possess all the advantages of hospitals located elsewhere, with valuable curative elements in addition.

It will be interesting to note whether the new resolutions of the California Legislature will receive serious consideration by the Medical Authorities of the Armed Forces.

## EDITORIAL COMMENT†

### ANTIBIOTICS IN ONIONS AND GARLIC

In 1931 Tokin,<sup>1</sup> Kovalenok<sup>2</sup> and others of the Moscow Laboratory of Experimental Biology, became interested in the volatile antibiotics of certain higher plants, particularly active bacteriocidal vapors given off by raw onions, garlic, horseradish and related plants. Bacteria, fungi and protozoa exposed to these vapors were usually killed within 2 to 5 minutes. They found these vapors ("phytoncides") to be particularly active against staphylococci, streptococci, *B. typhus* and the tubercle bacillus.

Toroptsev<sup>3</sup> and his associates of the Biological Institute, Tomsk University, attempted to determine a possible clinical application for these volatile "phytoncides." Aseptic wounds on rabbits and white rats were exposed for repeated 5-minute periods to concentrated vapors from fresh onion or garlic paste. The volatile antibiotics had a marked stimulating effect on the rate of aseptic wound healing in these animals, both granulation and epithelialization being hastened. The vapors were then used in the treatment of experimental septic wounds. Wounds measuring 1 x 1 cm. were made on both sides of rabbits and the wound surfaces covered with rabbit pus containing streptococci, staphylococci or other pathogens. After inflammation had developed, the wound on one side of each animal was exposed for 15 minutes daily to raw onion or garlic vapor. The untreated control wounds on the same rabbits showed a progressively phlegmatous and necrotic process. There was a rapid sterilization and accelerated healing of all septic wounds exposed to the antibiotic vapors.

So encouraging were these results that phytoncide therapy was applied to the treatment in infected human wounds. Eleven sluggish amputation wounds were selected, seven of the arm, one of the thigh and three of the foot. Eight of the wounds were purulent and contained streptococci, staphylococci or other pathogenic bacteria. In two patients the amputation was complicated by gas gangrene, and one by frostbite. Examination of the extremities before phytonide therapy showed distinct purulent inflammation of all wounds, with marked edema and odor in most cases. Many of

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comments by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California Medical Association to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.